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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/702,218	10/30/2000	Arthur W. Wang	PD-990302	9458

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HUGHES ELECTRONICS CORPORATION  
PATENT DOCKET ADMINISTRATION  
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EXAMINER

LEE, JOHN J

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 07/21/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

10

# Office Action Summary

Application No.

09/702,218

Applicant(s)

WANG, ARTHUR W.

Examiner

JOHN J LEE

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 30 October 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-11,15-21 and 24-30 is/are rejected.
- 7) ☒ Claim(s) 7,8,12-14,22,23,31 and 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. **Claims 1-6, 9, 15-21, and 24-30** are rejected under 35 U.S.C. 102(e) as being anticipated by Porcelli et al. (US Patent number 6,333,924).

Regarding **claim 1**, Porcelli discloses that a system for providing at least near continuous broadcast service to a terrestrial receiver, comprising:

a plurality of satellites (Fig. 1, 3), each satellite in an inclined, elliptical, geosynchronous orbit (abstract and Fig. 1, 3), each satellite providing a portion of time of the at least near continuous broadcast service to the terrestrial receiver (1, 2 in Fig. 1) (Fig. 1, 3 and column 4, lines 15 – column 5, lines 43).

Regarding **claim 2**, Porcelli discloses that the plurality of satellites comprises a first satellite (3 or 5A in Fig. 1) actively servicing the terrestrial receiver (1, 2 in Fig. 1) (column 5, lines 1 – 43), and a second satellite (5B in Fig. 1), wherein an apparent position of the second satellite relative to the terrestrial receiver is substantially proximate the apparent position of the first satellite relative to the terrestrial receiver when the first satellite completes providing its portion of the broadcast service (column 5, lines 1 – column 6, lines 59 and Fig. 1, 3).

Regarding **claim 3**, Porcelli discloses that a track of the apparent position of each of the satellites relative to the terrestrial receivers when the satellite is providing its portion of the at least near continuous broadcast service is substantially closed loop (column 5, lines 1 – column 6, lines 59 and Fig. 1, 3).

Regarding **claim 4**, Porcelli discloses that the terrestrial receiver comprises an antenna having a sensitivity characteristic substantially corresponding to the track of the apparent position of each of the satellites (column 5, lines 65 – column 7, lines 41 and Fig. 1, 3).

Regarding **claim 5**, Porcelli discloses that the track of the apparent position of each of the satellites substantially corresponds to a sensitivity pattern of an antenna at the terrestrial receiver (column 5, lines 65 – column 7, lines 41, Fig. 1, 3, and column 2, lines 5 – column 3, lines 33).

Regarding **claim 6**, Porcelli discloses that a track of the apparent position of each of the satellites relative to the terrestrial receivers when the satellite is providing its

Art Unit: 2684

portion of the at least near continuous broadcast service is substantially teardrop-shaped (Fig. 1, 2 and column 5, lines 65 – column 7, lines 41).

Regarding **claim 9**, Porcelli discloses all the limitation, as discussed in claim 1. Furthermore, Porcelli further discloses that an antenna having a sensitivity characteristic substantially corresponding to the track of the apparent position of each of the satellites (Fig. 1-3 and column 5, lines 65 – column 7, lines 41).

Regarding **claim 15**, Porcelli discloses all the limitation, as discussed in claims 1 and 2.

Regarding **claim 16**, Porcelli discloses all the limitation, as discussed in claims 1 and 9.

Regarding **claim 17**, Porcelli discloses all the limitation, as discussed in claims 1 and 2.

Regarding **claim 18**, Porcelli discloses all the limitation, as discussed in claims 1 and 3.

Regarding **claim 19**, Porcelli discloses all the limitation, as discussed in claims 1 and 4.

Regarding **claim 20**, Porcelli discloses all the limitation, as discussed in claims 1 and 5.

Regarding **claim 21**, Porcelli discloses all the limitation, as discussed in claims 1 and 6.

Regarding **claim 24**, Porcelli discloses all the limitation, as discussed in claims 1 and 16.

Regarding **claim 25**, Porcelli discloses all the limitation, as discussed in claims 1 and 2.

Regarding **claim 26**, Porcelli discloses all the limitation, as discussed in claims 1 and 2.

Regarding **claim 27**, Porcelli discloses all the limitation, as discussed in claims 1 and 3.

Regarding **claim 28**, Porcelli discloses all the limitation, as discussed in claims 1 and 4.

Regarding **claim 29**, Porcelli discloses all the limitation, as discussed in claims 1 and 5.

Regarding **claim 30**, Porcelli discloses all the limitation, as discussed in claims 1 and 6.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claims 10 and 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Porcelli in view of Maeda et al. (US Patent number 6,422,516).

Regarding **claim 10**, Porcelli does not specifically disclose the limitation “the receiver antenna comprises a reflector having a focal line and a focal point on the focal

Art Unit: 2684

line and a head, wherein the head is disposed offset from the focal point”. However, Maeda discloses the limitation “the receiver antenna comprises a reflector having a focal line and a focal point on the focal line and a head, wherein the head is disposed offset from the focal point” (column 4, lines 17 – column 5, lines 16 and Fig. 5, 6). It would have been obvious to one having ordinary skill in the art, at the time the invention was made to modify the Porcelli system as taught by Maeda. Doing so would enhance the signal/data adaptability in satellite communication system.

Regarding **claim 11**, Porcelli discloses all the limitation, as discussed in claim 10.

***Allowable Subject Matter***

5. Claims 7, 8, 12-14, 22, 23, 31, and 32 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record fails to show “the satellite orbits are an orbital inclination approximately equal to 50 degrees and an eccentricity approximately equal to 0.13, a period approximately equal to 86164 seconds, an altitude at perigee approximately equal to 30305 kilometers, and an altitude at apogee approximately equal to 41268 kilometers, and the reflector is approximately 18 centimeters in diameter, and the head is disposed approximately 7 inches offset from the focal point and approximately 4 inches offset from the focal line” as specified in the claims 7, 8, 12-14, 22, 23, 31, and 32.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Briskman et al.(US Patent number 6,223,019) discloses Efficient High Latitude Service Area Satellite Mobile Broadcasting System.

Chang et al. (US Patent number 6,501,941) discloses Method for Identifying Growth Limits of Handhold Services for Mobile Satellite Communications.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-6606 (for informal or draft communications, please label  
"PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John J. Lee** whose telephone number is **(703) 306-5936**. He can normally be reached Monday-Thursday and alternate Fridays from 8:30am-5:00 pm. If attempts to reach the examiner are unsuccessful, the examiner's <sup>acting</sup> supervisor, **Nay Maung**, can be reached on **(703) 308-7745**. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-4700.




Application/Control Number: 09/702,218  
Art Unit: 2684

Page 8

J.L  
April 19, 2003

John J Lee

  
NAY MAUNG  
PRIMARY EXAMINER